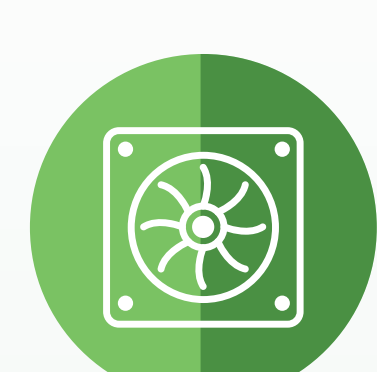


# Advanced Lightweight Battery Systems Optimized For Fast Charging, Safety And Second-life Applications

## Project Objectives



Modular concept scalable to different types of vehicles **aimed at creating advanced battery pack designs and systems.**



**Innovative cooling technologies** that deliver lower battery temperatures during operation and charging **to ensure an extended life-cycle.**



Lightweight modular solutions designed following an **eco-design approach to allow subsequent disassembly, recycling and reuse.**



Advanced remote control, maintenance and troubleshooting of each battery module through **a flexible advanced Battery Management System (BMS) that ensures safety** even at higher peak energy densities.



## Expected Results



An **improvement of the Peak Energy Density** by around 50%.



A 15 to 20% **improvement over the full lifecycle.**



A **20% weight reduction of the battery system.**



**Allow for fast charging while maintaining or improving battery capacity and useful life.**



A **25% charging time reduction** with a 150 kW charger.



**Extensive knowledge improvements in thermal management systems and second life / recycling.**

## Expected Impacts



**Significant improvement in the performance of EVs**



**Overcome the uncertainty of range.**



**Bigger attractiveness of EVs** with reduced charging times and extended battery life.



**In line with Circular Economy goals.**



**Improved dismantling and reuse / recycling approaches.**



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